REMARKS/ARGUMENTS

This amendment is submitted in response to the Office Action dated June 15, 2007. Claim 14 has been amended as requested by the Examiner to indicate that the computer program is stored on a computer readable medium. Claims 1-19 are currently pending in the present application. Reconsideration and allowance is respectfully requested in view of the amendments and the remarks below.

1. The Rejection under 35 U.S.C. §101

Claims 14-18 have been rejected under 35 U.S.C. §101 on the basis that the claimed invention was directed to non-statutory subject matter because the computer program of claims 14-18 was not required to be stored on a computer readable medium. Claim 14 has been amended to require that the computer program be stored on a computer readable medium in order to obviate this rejection. Claims 15-18 all depend from claim 14 and thus the amendment to claim 14 obviates the rejection of claims 15-18 as well. Favorable consideration and withdrawal of the rejection in view of the amendment of claim 14 is requested.

2. The Rejection under 35 U.S.C. §103(a)

Claims 1-19 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent no. 6,035,404 (Zhao) in view of U.S. Patent no. 6,757,679 (Fritz). This rejection is traversed and reconsideration is requested for the reasons which follow.

Zhao discloses a system and method for managing user logins to a restricted computer service for concurrent users in a stateless network (col. 1, line 64 to col. 2, line 2 of Zhao). Zhao intends to manage user logins to a computer service where no limits are placed upon the time during which a user has access to the service (column 1, lines 37-38 of Zhao), but where the maximum number of users for a particular account is a predetermined fixed number (column 1, lines 43-49 and col. 8, lines 16-19 of Zhao).

Zhao proposes a system wherein a user attempting to log in enters a user ID and password. The system then obtains an internal user ID (IUID) and a user mask. The user mask is compared with a user login map (ULM) to determine if the login is permitted, including checking to see if the predetermined maximum number of users for that particular account would

be exceeded by the login (abstract and col. 2, lines 25-44 of Zhao). If the login is permitted, the IUID is entered into a state lookup table (SLT) along with other information about the logged in session (column 2, lines 25-31 of Zhao). The SLT keeps track of login sessions in progress (column 2, lines 51-52 of Zhao).

Each session, which is established after a user login, has an entry in the SLT table (column 5, lines 46-47 of Zhao). If the maximum number of logins for a particular account has been reached, the login is not permitted until the system either forces the logout of a session already in progress to open a place for the new login (col. 7, lines 7-8 of Zhao) or the system sets a time-out period for the session that has been in progress the longest and then forces the logout of that session when the time-out period expires (col. 7, lines 9-11 of Zhao. In the second case, the user logging in is informed of the time before his login will be permitted (column 2, lines 45-50 and col. 7, lines 9-11 of Zhao). Thus, for each login request exceeding the maximum number of logins permitted, one in progress session of a concurrent user is forced to logout in order to make room within the predetermined fixed maximum number of logins for the new login (column 4, lines 6-8 and col. 7, lines 4-15 of Zhao).

In particular, when a user in the system of Zhao is logged on, the starting time of a session is entered in the SLT. If the maximum concurrent user number is reached, the login manager can set mandatory time out time for the earliest started session having the same IUID. A state manager monitors to see when those times are reached and then removes them from the SLT (column 6, lines 10-15 and column 7, lines 21-26 of Zhao). Forced time-out times can be derived from several circumstances, such as from the level of access permitted to an individual user the need to limit user time to allow another user to logon, etc (column 6, lines 24-28 of Zhao).

From the above, it is clear that the maximum number of user sessions that can be processed simultaneously is a predetermined fixed number in the system of Zhao. As a result, there is no dynamic adjustment of the maximum number of user sessions, as is required by the present invention, nor does Zhao provide a means for dynamically adjusting the maximum number of user sessions. Rather, the system of Zhao permits a fixed, predetermined maximum number of user sessions by comparison of the number of users logged in to the fixed, predetermined maximum number of users using the user login map. The user login map (ULM)

is used to keep track of the number of users logged onto the system (column 2, lines 15-20 of Zhao).

This is confirmed by col. 2, lines 32-51 of Zhao which teaches that if the maximum number of logins already exists, a new login will not be permitted until an existing user logs off or is forced to logout. There is no dynamic adjustment of the maximum number of users in Zhao. Claims 5-8 of Zhao also require that, "...authorizing the login if said comparison indicates that the maximum number of logins allowed for said IUID will not be exceeded by said authorizing." Finally, Zhao teaches at col. 8, lines 16-19 that, "...the system described herein may be useful in allowing access to a restricted machine or entry system which needs to limit concurrent access to a fixed number of users." (emphasis added). From this, it is clear that the system of Zhao employs a predetermined, fixed maximum number of users to determine the number of logins permitted, and does not dynamically adjust the maximum number of users as does the present invention.

The examiner appears to suggest that the SLT has a function in determining the maximum number of user sessions to be processed simultaneously. However, an entry for a user in the SLT is only made after access to the system has been permitted (column 2, lines 29-31 of Zhao). Thus, the SLT of Zhao does not play a role in determining the maximum number of permitted user sessions.

The Applicant respectfully submits that a *prima facie* case of obviousness has not been established by the combination of Zhao with Fritz.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). According to M.P.E.P. § 2143,

> To establish a *prima facie* case of obviousness, three basic criteria must be met. **... Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.**
>
> [*emphasis added, Citation omitted.*]

The problem solved by the present invention as defined in claim 1 is to provide a method of controlling the creation of a user session in a multi-user computer system that takes into account different levels of resources and/or requests for user sessions, while allowing efficient

use of the available resources. The problem is solved by maintaining the maximum number of log-on requests as a variable which can be adjusted. Thus, the maximum number of log-on requests can be adjusted to take into account the availability of computer resources for this purpose.

As discussed above, this aspect of the present invention is not taught or suggested by Zhao which employs a predetermined fixed maximum number of users. Moreover, this solution to the problem is not attainable from the teachings of Fritz. Fritz does not provide any teaching as to how to address the problem addressed by the present invention, namely, to allow a limited set of computer resources to efficiently host multiple user sessions on a multi-user computer system by adjusting the resources allocated to creation of user sessions.

Fritz does not disclose any of the claimed features of: (1) a method of controlling the creation of a user session, (2) the processing of a log-on request by a user at a terminal, (3) that the creation of the user session is halted when more than a maximum number of log-on requests is being processed, and (4) that the maximum number of log-on requests is maintained as a variable which can be adjusted in the multi-user computer system.

The Examiner admitted in paragraph 4 of the Final Rejection dated November 28, 2006 that Fritz does not mention that the requestor may be making a log-on request. Thus, since Fritz does not even contemplate the making of log-on requests, a skilled person would certainly not derive from Fritz the concept of maintaining the maximum number of log-on requests as a variable that can be adjusted.

Instead, Fritz teaches a hardware implementation of a queue management system on a chip (See col. 2, lines 27-30 of Fritz). In the hardware implementation of Fritz, the queues consist of m queue-base units representing the m tops of queues (See col. 2, lines 44-45 of Fritz). Each queue-base unit has access to the add- and remove-input lines of the device implementing the queue management system (See col. 2, lines 61-63 of Fritz). The amount of hardware needed for m queues grows linearly with m (See col. 4, lines 13-15 of Fritz). Thus, m is not maintained as a variable which can be adjusted, but rather is a constant determined by the amount of hardware resources included on the chip of Fritz. Thus, the system of Fritz does not maintain the maximum number of requests as a variable that can be adjusted.

Accordingly, since Fritz says nothing about log-on requests Fritz immediately lacks two features of claim 1 of the present application, namely: (1) processing a log-on request entered by

a user at a terminal, and (2) maintaining the maximum number of log-on requests as a variable that can be adjusted should there be a change in user demand.

Fritz says that, "In most cases, the maximum number of outstanding requests per requestor o at a given time is limited such that the total number of requests at a given time is n=oxp." See col. 2, lines 24-26 of Fritz. Fritz then says that, "In said hardware implementation the queues consist of ... n so-called queue elements representing the n requests. Each request...must be associated with a queue element." See col. 2, lines 44-48 of Fritz. Fritz also states that, "The advantage of this implementation is that the amount of hardware needed for n elements grows linearly with n..." See col. 4, lines 12-13 of Fritz. The number of requests "n" of Fritz is determined by the hardware queue elements and thus the number of requests "n" cannot be dynamically adjusted.

Since Fritz is a hardware implementation, none of the numbers n (the maximum number of possible requests), p (the number of requesters), and o (the maximum number of outstanding requests per requester at a given time) are variables. In fact, each of these numbers is a constant determined by the hardware elements. The Examiner has nowhere shown that Fritz contemplates that any of n, p or o would be variable in a given hardware system. Thus, Fritz does not contemplate dynamic adjustment of the maximum number of user sessions since in the hardware implementation of Fritz, the numbers n (the maximum number of possible requests), p (the number of requesters), and o (the maximum number of outstanding requests per requester at a given time) are all constants determined by the amount of hardware used to build the system.

The Examiner relies on a combination of Fritz and Zhao to support the present rejection. However, as discussed above, Zhao does not teach maintaining the maximum number of logon requests as a variable that can be dynamically adjusted should there be a change in user demand. Rather, Zhao assumes that the system will operate based on a predetermined, fixed number of maximum users, as discussed above. In Fritz, as discussed below, the hardware determines the maximum number of requests and the maximum number of requests that can be handled by the hardware system of Fritz is a constant not a variable. Accordingly, since neither Zhao nor Fritz discloses this feature of claim 1 of the present application, the combination of Zhao with Fritz does not make out a case of *prima facie* obviousness against claim 1.

Claims 10 and 14 define a multi-user computer system and computer program for controlling the creation of a user session in a multi-user computer system in terms of features

corresponding to those set forth in method claim 1. Consequently, the same arguments and reasoning apply to claims 10 and 14 as are given for claim 1 above. Dependent claims 2-9, 11-13 and 15-18 are unobvious for at least the same reasons as given above for claims 1, 10 and 14.

Claim 19 contains the additional requirement that, "...said system including an adjustment mechanism for dynamically adjusting the maximum number of user sessions which can be processed simultaneously." Thus, claim 19 is clearly patentable over a combination of Zhao and Fritz for the reasons given above and because neither Zhao nor Fritz teaches or suggests the provision of an adjustment mechanism for adjusting the maximum number of user sessions which can be processed simultaneously. The underlined words are important since Zhao and Fritz do not disclose: (1) an adjustment mechanism for adjusting the maximum number of user sessions, or (2) adjusting the maximum number of user sessions.

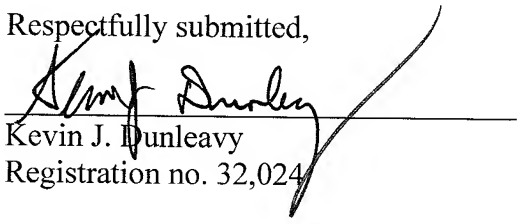
If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine,* 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Thus, claims 2-9, 11-13 and 15-18 are considered to be unobvious for at least the same reasons as given above with respect to claims 1, 10 and 14.

3. Conclusion

For the above reasons, it is submitted that a *prima facie* case for obviousness has not been established since the limitations of the independent claims are not taught or suggested by Zhao and Fritz. It is therefore submitted that claims 1-19 are in condition for allowance.

Reconsideration and allowance is respectfully requested in view of the remarks made above.

Respectfully submitted,



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